v.10 #1

VOLUME 10, NO. 1 AUGUST 1967

REFERENCE COPY NOT TO BE CIRCULATED

GENETICAL RESEARCH

EDITORIAL BOARD

C. H. WADDINGTON (*Chairman*)
CHARLOTTE AUERBACH D. LEWIS
H. GRÜNEBERG G. PONTECORVO
W. HAYES A. ROBERTSON

EXECUTIVE EDITOR
E. C. R. REEVE

ASSISTANT EXECUTIVE EDITOR
J. O. BISHOP

Clendening Medical Library
SEP 12 1967
University of Kansas Medical Center

PUBLISHED BY
CAMBRIDGE UNIVERSITY PRESS
Bentley House, 200 Euston Road, London, N.W. 1
American Branch: 32 East 57th Street, New York, N.Y. 10022

SUBSCRIPTION £5 net (U.S.A. $18.50) per volume

SINGLE PARTS 45*s*. net (U.S.A. $7.50)

GENETICAL RESEARCH

GENETICAL RESEARCH publishes original work on all aspects of genetics, or in any field of research which has an important bearing on genetics. Papers will be submitted to referees before acceptance. They will generally be printed in order of acceptance. In addition, Short Papers (see below) may be included if received 3 months before publication date.

TWO VOLUMES are published per year each consisting of three parts plus an index.

SUBSCRIPTIONS may be sent to any bookseller or to the Cambridge University Press, 200 Euston Road, London, N.W. 1. Subscriptions in the U.S.A. should be sent to the American Branch of the Press, 32 East 57th Street, New York, N.Y. 10022. The subscription price is £5 net (including postage) for a volume of three parts ($18.50 in the U.S.A.), payable in advance; Separate parts 45*s*. or $7.50 each (plus postage).

NOTES FOR CONTRIBUTORS

CONTRIBUTIONS will be welcomed from scientists of all nationalities, but must be written in English, with an English summary. An additional summary in French, German, Russian or Italian will be accepted. Papers should be sent to the Executive Editor, Dr. E. C. R. Reeve, Institute of Animal Genetics, West Mains Road, Edinburgh 9.

GENERAL. Submission of a paper will be taken to imply that it is unpublished and is not being considered for publication elsewhere. Papers published in *Genetical Research* may not be reprinted or published in translation without permission from the Editorial Board. Papers should be as concise as clarity permits, and illustrations kept as few as possible.

SHORT PAPERS. This category is designed for concisely written reports of work for which rapid publication is considered desirable. Such papers will normally be published within three months of receipt in acceptable form. They should not exceed 6 pages of print in length.

TYPESCRIPTS. A top copy and one carbon copy should be submitted. They should be typed with double-spacing, on one side of the paper, leaving margins of about 1½ inches at the left-hand side and head of each sheet. Quarto is preferred to foolscap paper. Heavily corrected typescripts may have to be returned to the author for retyping. Papers should state the name and address of the author (or his proxy) to whom proofs are to be sent. The address of the laboratory at which the work was carried out will be printed with the authors' names at the head of the paper, and changes of address and sources of financial support may be added in footnotes.

A short title should be supplied for running headlines; this must not exceed 50 characters, counting each letter and space as one character.

(*continued inside back of cover*)

VOLUME X

INDEX OF SUBJECTS AND AUTHORS

Only main topics are listed, and reference is given to the first page of each paper in which they are discussed.

Acriflavine, effects on episome and bacterial chromosome transfer in *Escherichia coli* K12, 241
Adams, M. S., 313
Aedes aegypti, comparative genetical study on DDT resistance, 219
Aegilops speltoides, homoeologous pairing of chromosomes from *Agropyron elongatum*, 63
Agropyron elongatum, homoeologous pairing of chromosomes from, with *Aegilops speltoides* and *Triticum aestivum*, 63
Anopheles gambiae, genetic studies on mutation in species A and B, 205
Arai, T., 241
Aromatic amino acid synthesis in *Aspergillus nidulans*, 261
Ascobolus immersus, simultaneous conversion in linked genes, 121
Ascomycetes, differential maturation of asci and recombination, 1
Aspergillus nidulans
  aromatic amino acid synthesis and parafluorophenylalanine resistance, 261
  chromosome instability related to gene suppression, 173
Aspergillus niger, genetic analysis by means of parasexual cycle, 45
Autogamy, maintenance of heterozygosity after, in *Euplotes*, 35

Bacteriophages, polarized exclusion of T2 in crosses with T4, 13
Ball, C., 173
Bishop, J. O., 107

Canalized phenotype, selection for and against, 21
Cell number in relation to heterosis in embryonic growth in mouse, 235
Chloramphenicol, inhibition of respiratory enzyme synthesis by, in *Saccharomyces cerevisiae*, 199
Chromosome instability and gene suppression in *Aspergillus nidulans*, 173
Claxton, J. H., 161
Cleft palate in man in relation to developmental 'noise', 313
Colicin E1a, sex factor of, in *Salmonella typhimurium*, 323
Congenital tremor, penetrance of, in chick, 229
Conversion, simultaneous in linked genes in *Ascobolus immersus*, 121
Cytoplasmic mutant (SG), heterokaryon studies in *Neurospora crassa*, 185

Dawson, G. W. P., 127
Davison, J. R. N., 107
DDT resistance, a genetical study in adult and larval *Aedes aegypti*, 219
De Groot, B., 13
Developmental 'noise' and a congenital malformation in man, 313
Differential maturation of asci and recombination studies, 1
Diuretic responses, selection for, in mouse, 95
Divergence in Vetukhiv's experimental populations of *Drosophila pseudoobscura*, 303
Drosophila
  genetic divergence in Vetukhiv's experimental populations, 303
  inversion heterozygosity and selection for wing length, 81
  relationship between heterochromatization and variegation, 143
  selection for and against canalized phenotype, 21

Escherichia coli
  episome and chromosome transfer, effects of acriflavine, in K12, 241
  partial deletion map of the galactose operon of K12, 107
Euplotes minuta, maintenance of heterozygosity of *mt* locus after autogamy, 35

Finlayson, J. S., 195
Frame, R. M., 107

Galactose operon, partial deletion map of, in *Escherichia coli* K12, 107
Genetic analysis by the parasexual cycle in *Aspergillus niger*, 45
Genetic variation in diuretic responses in mouse, 95

Hair follicle development in tabby mice, 161
Hartmann-Goldstein, I. J., 143
Heterochromatization, relationship between, and variegation in *Drosophila melanogaster*, 143
Heterokaryon studies of a cytoplasmic mutant in *Neurospora crassa*, 185
Heterosis in relation to cell number in embryonic growth of mouse, 235
Homoeologous pairing of chromosomes from *Agropyron elongatum* with *Triticum aestivum* and *Aegilops speltoides*, 63
Hudson, D. M., 195
Hybrids between pigeons and doves and relationships amongst interaction products, 273

Inbreeding, effects on litter size in mouse, 73
Induced mating technique for *Anopheles gambiae*, 205
Interaction antigen in hybrids of pigeons and doves, 273
Inversion heterozygosity and selection for wing length in *Drosophila melanogaster*, 81
Irwin, M. R., 273

Jarolmen, H., 289
Johnson, R., 63

Kimber, G., 63, 295
Kitagawa, O., 303
Krzanowska, H., 235

LaBar, M. M., 273
Lamb, B. C., 1
Lawn, A. M., 323
Lhoas, P., 45
Linkage of a urinary protein component to brown coat colour locus in mouse, 195
Linnane, A. W., 199
Litter size, effects of inbreeding on, in mouse, 73
Luporini, P., 35

Maintenance of heterozygosity after autogamy in *Euplotes*, 35
Mason, G. F., 205
Maturity, genetic control of, in *Tetrahymena pyriformis*, 319
McCarthy, J. C., 73
Meynell, G. G., 323
Microtus agrestis, serum esterase variation, 135
Mouse
  cell number in relation to heterosis during embryonic growth, 235
  effects of inbreeding on litter size, 73
  hair follicle development in tabby (*Ta*), 161
  linkage of a urinary protein component to brown coat colour locus, 195
  Nijmegen waltzer, a new neurological mutant, 117
  selection for diuretic responses, 95

Neurospora crassa
  differential maturation of asci, 1
  heterokaryon studies of a cytoplasmic mutant, 185
Neurospora, unbiased second division segregation, 289
Nicotiana, S gene polymorphism, 251
Nijmegen waltzer (*nv*), a new neurological mutant in mouse, 117
Niswander, J. D., 313
Nobili, R., 35

Pandey, K. K., 251
Parasexual cycle, genetic analysis in *Aspergillus niger*, 45
Paszewska, A., 121
Penetrance of congenital tremor in White Leghorn chicks, 229
Polarized exclusion of T2 in crosses with T4, 13
Polymorphism of S gene in *Nicotiana* species and genotypes, 251
Potter, M., 195
Prevosti, A., 81
Puhalla, J. E., 185

Recombination
  effect on differential maturation of asci, 1
  exclusion of T2 in crosses with T4, 13
Resistance to para-fluorophenylalanine in *Aspergillus nidulans*, 261
Reversion of *tryA* in *Salmonella typhimurium*, 127
Riyasaty, S., 127
Russell, M. A., 135

Saccharomyces cerevisiae, inhibition of respiratory enzyme synthesis by chloramphenicol, 199
Salmonella typhimurium
frequent *tryA* auxotrophs in, 127
sex factor of colicin E1a, 323
Saunders, G., 199
Segregation, unbiased second-division, in *Neurospora* species, 289
Selection
for and against canalized phenotype in *Drosophila*, 21
for diuretic responses in mouse, 95
for wing length, and inversion heterozygosity in *Drosophila subobscura*, 81
Self-incompatability alleles in *Nicotiana*, 251
Semeonoff, R., 135
Serum esterase, variation in *Microtus agerestis*, 135
Simon, Ellen M., 319
Sinha, U., 261
Sittmann, K., 229
Sordaria fimicola, differential maturation of asci, 1
Spickett, S. G., 95
Srb, A. M., 185, 289
Stewart, J., 95
Suppression, chromosome instability and, in *Aspergillus nidulans*, 173
Tetrahymena pyriformis, genetic control of maturity, 319
Translocated alien chromosome segment to wheat chromosome, 295
Triticum aestivum
homoeologous pairing of chromosomes from *Agropyron elongatum*, 63
recognition of alien chromosome segment, 295

Urinary protein component linked to brown coat colour in mouse, 195

van Abeelen, J. H. F., 117
van der Kroon, P. H. W., 117
Variegation, relationship with heterochromatization, in *Drosophila melanogaster*, 143
Vetukhiv's experimental population of *Drosophila pseudoobscura*, genetic divergence in, 303

Watanabe, T., 241
Wheat, homoeologous pairing of chromosomes in complex hybrids, 63
Wilkie, D., 199
Wood, R. J., 219

Young, S. S. Y., 21